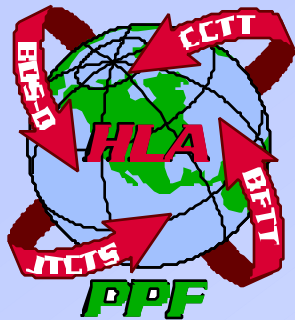# Platform Proto-Federation AMG-15
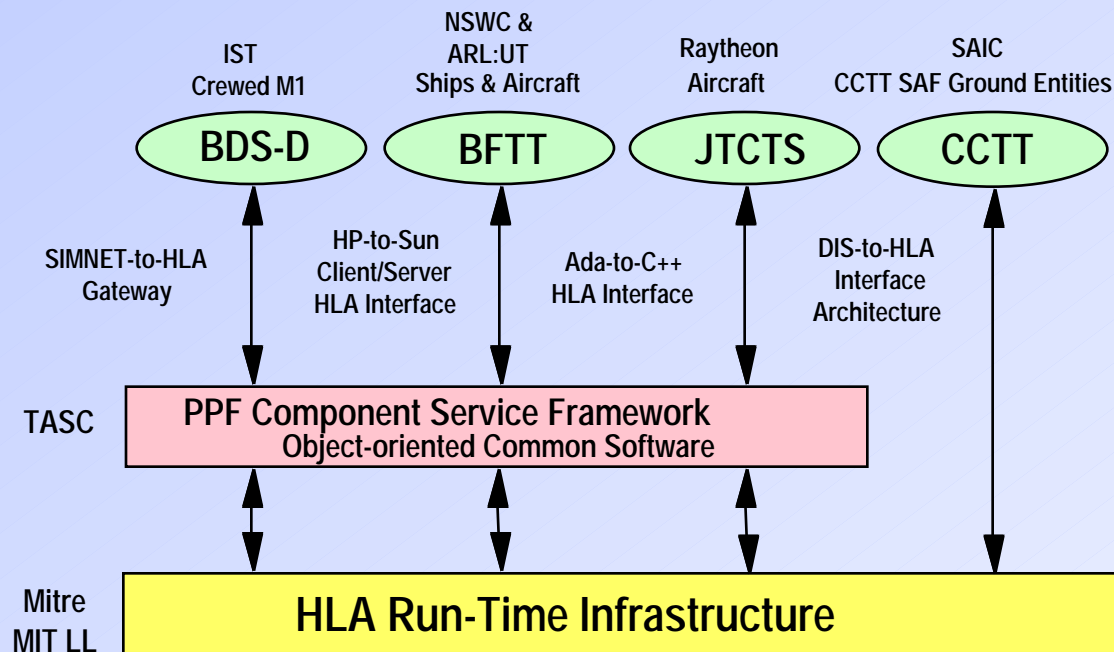
*Susan M. Harkrider*

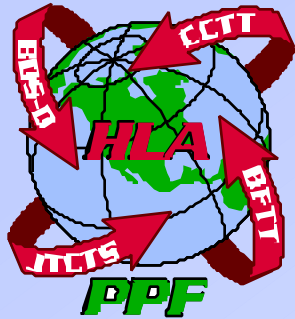*STRICOM*

*10 October 1996*

# Platform Proto Federation
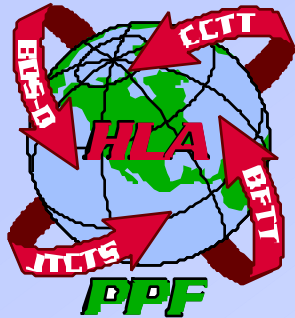
IST
Crewed M1

NSWC &
ARL:UT
Ships & Aircraft

Raytheon
Aircraft

SAIC
CCTT SAF Ground Entities

**BDS-D**  **BFTT**  **JTCTS**  **CCTT**

SIMNET-to-HLA
Gateway

HP-to-Sun
Client/Server
HLA Interface

Ada-to-C++
HLA Interface

DIS-to-HLA
Interface
Architecture

TASC

**PPF Component Service Framework**
**Object-oriented Common Software**

Mitre
MIT LL

**HLA Run-Time Infrastructure**

- **platform level real-time simulations**
- **DIS 2.X based**
- **objectives**
  - **HLA functionality**
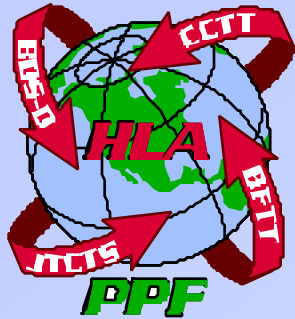  - **performance**
  - **CSF/middleware**

# PPF Contributions to HLA Definition Process

- **Addressed the DIS community concerns & issues**
  - **functionality**
  - **performance, esp. latency**
  - **implementation methodologies**

- **Developed common software to facilitate RTI integration**

- **Prototyped FOM Development Tools**
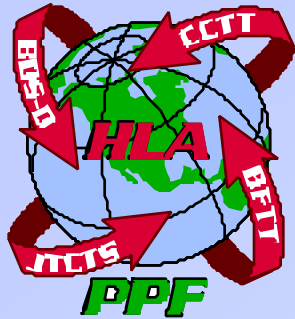
- **Participated in AMG & working group meetings**

# Lessons Learned for Transition

- **HLA provides sufficient functionality for DIS-based systems**

- **Performance does not meet current requirements**

- **Common software can be beneficial**

- **Compliance testing is a necessary step in HLA implementation**

- **HLA Baseline Issues:**

    - **OMT needs behavior/semantic representation templates,**

    - **Need to filter interactions based on interacting objects as well as by interaction class type,**

    - **An effective Data Distribution Management service is critical to DIS legacy scalability.**

# DIS Legacy HLA Compliance

- DIS legacy systems require a translation layer to the RTI (Either CSF or legacy middleware infrastructure).

- HLA Time Management Services not currently used.

- Further SIMAN and other protocol issues need to be resolved.

- HLA offers capabilities beyond DIS:

  – Flexibility of transport types/rate,

  – Capability for multiple fidelity attributes,

  – Data Distribution (Filter Space),

  – Ownership Transfer.

# Follow Up Actions

- **Continue evaluations of HLA (performance, functionality)**

- **Continue FOM development tool prototyping**

- **Develop compliance testing methodology & toolset**

- **Provide education to user community**

- **Develop catalog of available tools with their description**

- **Develop exercise setup performance analysis toolset**

- **Participate in "RTI Friends" program**